

In the Specification:

Please delete the title "METHOD FOR DETECTION OF BIOLOGICAL FACTORS IN EPIDERMIS" and replace therefor with --METHODS AND KITS FOR OBTAINING AND ANALYZING SKIN SAMPLES FOR THE DETECTION OF NUCLEIC ACIDS-- .

In the Claims:

Please cancel claims 1 to 10 without prejudice.

Please amend the claims as follows:

In claim 28, first line of the claim, delete "ICD" in insert therefor --irritant contact dermatitis (ICD)-- .

In claim 35, first line of the claim, delete "ACD" in insert therefor --allergic contact dermatitis (ACD)-- .

In claim 54, first line of the claim, delete "ACD" in insert therefor --allergic contact dermatitis (ACD)-- .

Please add the following new claims:

sub DP
--64. A non-invasive method for obtaining a skin sample for use in isolating or detecting a nucleic acid in a skin sample, the method comprising:

A ✓
(a) applying at least one application of an adhesive to the skin and removing the adhesive from the skin such that a sample comprising a nucleic acid adheres to the adhesive after its removal, or, scraping the skin with an instrument to remove a sample comprising a nucleic acid from the skin, thereby obtaining a skin sample comprising a nucleic acid;

(b) isolating or detecting the nucleic acid from the skin sample of step (a).

65. The method of claim 64, wherein the skin sample consists essentially of stratum corneum.

66. The method of claim 64, wherein the skin sample consists essentially of stratum lucidum cells.

67. The method of claim 64, wherein the skin sample consists essentially of stratum granulosum cells.

68. The method of claim 64, wherein the skin sample consists essentially of stratum spinosum cells.

69. The method of claim 64, wherein the skin sample consists essentially of stratum basalis cells.

70. The method of claim 64, wherein an adhesive surface is applied one time to the skin.

71. The method of claim 70, wherein an adhesive surface is applied two or more times to the skin.

72. The method of claim 65, wherein the stratum corneum skin sample is isolated by one application of an adhesive surface to an outer layer of the skin.

73. The method of claim 64, wherein the adhesive surface comprises an adhesive tape.

74. The method of claim 73, wherein the adhesive tape comprises a duct tape, a Scotch™ tape or a D-SQUAME™ tape.

75. The method of claim 64, wherein a skin sample is isolated by scraping an outer layer of skin with a rigid instrument.

76. The method of claim 64, wherein the nucleic acid comprises a DNA.

sub F3
cont.

77. The method of claim 64, wherein the nucleic acid comprises an RNA.

78. The method of claim 77, wherein the RNA comprises an mRNA.

79. The method of claim 78, wherein the nucleic acid encodes a polypeptide.

sub F4

80. The method of claim 79, wherein the polypeptide comprises a cytokine.

81. The method of claim 79, wherein the polypeptide comprises an interleukin.

Sub B1

82. The method of claim 79, wherein the cytokine comprises an IL-1, an IL-2, an IL-3, an IL-4, an IL-5, an IL-6, an IL-7, an IL-8, an IL-9, an IL-10, an IL-12, an IL-13, an IL-14, a granulocyte macrophage colony stimulating factor (GM-CSF), or an interferon.

sub F6

83. The method of claim 78, wherein the polypeptide comprises an inflammatory mediator.

84. The method of claim 83, wherein the inflammatory mediator comprises a leukotriene or a prostaglandin.

85. The method of claim 64, further comprising identifying or quantifying the nucleic acid.

86. The method of claim 85, wherein identifying or quantifying the nucleic acid is by a polymerase chain reaction (PCR).

87. The method of claim 85, wherein identifying or quantifying the nucleic acid is by hybridization with a polynucleotide probe.

88. The method of claim 85, wherein identifying or quantifying the nucleic acid is by RNase protection assay.

89. The method of claim 85, wherein by identifying or quantifying a nucleic acid in a recovered sample the presence of a local or systemic disease, a disorder, a genetic disease, or an inflammatory reaction is identified, distinguished, or diagnosed.

90. The method of claim 64, wherein the nucleic acid is associated with a local biological reaction.

91. The method of claim 64, wherein the nucleic acid is associated with a systemic biological reaction.

92. The method of claim 64, further comprising applying the sample to a chip.

93. The method of claim 64, wherein the skin sample is a human skin sample.

94. The method of claim 64, further comprising applying the cellular material sample to a chip.

95. A non-invasive method for isolating a nucleic acid in a skin cell of a subject comprising:

a) removing an outer skin layer to expose an inner skin layer by scraping or stripping by use of an adhesive;

(b) removing an inner skin sample from the exposed skin by scraping or stripping by use of an adhesive; and,

(c) isolating or detecting a nucleic acid sample from the inner skin sample.

96. The method of claim 95, wherein the outer skin layer comprises a stratum corneum.

Sub B2 97. The method of claim 95, wherein the adhesive comprises an adhesive tape

98. The method of claim 95, wherein the nucleic acid comprises a DNA.

99. The method of claim 95, wherein the nucleic acid comprises an RNA.

100. The method of claim 99, wherein the nucleic acid encodes a polypeptide.

A 101. The method of claim 95, further comprising identifying or quantifying the nucleic acid.

102. The method of claim 95, further comprising applying the nucleic acid, or complementary equivalent, to a chip.

103. The method of claim 95, wherein the skin sample is a human skin sample.--

REMARKS

Status of the Claims

Before this amendment, no claims have been canceled or added. Thus, before entry of the instant amendment, claims 1 to 63 are pending.

Claims 28, 35 and 54 are amended in the instant amendment. New claims 64 to 103 are added. Thus, after entry of the instant amendment, claims 11 to 103 will be pending. For the Examiner's convenience, the pending claims *after* entry of the instant amendment is attached as Appendix A.

The Restriction Requirement

In the office action dated October 16, 2000, the instant application was restricted to one of the following seven inventions under 35 U.S.C. §121: